

ABSTRACT OF THE DISCLOSURE

A composite metal seal includes core of relatively hard metal, and at least one annular region of relatively soft metal. The annular region of relatively soft metal is integrally bonded with the core of relatively hard metal, and has an annular sealing surface for providing a fluid pressure seal. Such a composite metal seal can be manufactured by welding an overlay of the relatively soft metal onto a workpiece of the relatively hard metal; and machining the overlay of the relatively soft metal to form the annular sealing surface. In a preferred construction, the seal is a ring including two annular regions of the relatively soft metal, which provide tapered annular sealing surfaces for engaging respective sealing surfaces of two mating hubs. Such a seal ring can be used in a subsea collet-actuated pipeline connector to permit a metal-to-metal seal connection to be made and broken a number of times.